

## **Project Operating Plan – SPRU Recovery Act Project**

### **SPRU – Accelerate North Field Land Area Remediation and Accelerate Nuclear Facility D&D Project Operating Plan**

#### **BACKGROUND**

<b>Recovery Act Project:</b>	SPRU – Accelerate North Field Land Area Remediation
<b>TAFS:</b>	89-09/10-0253
<b>Project Identification Code:</b>	2002160
<b>Recovery Act Bill Reference:</b>	PL 111-5 Title IV – Energy and Water Development, Defense Environmental Cleanup (H.R. 1-26)
<b>Project Cost:</b>	\$58,575,000
<b>Budget Authority:</b>	06049, FD.06.10.00.0
<b>Program Office:</b>	Office of Environmental Management (EM)
<b>Recovery Program Plan:</b>	EM – Defense
<b>Management Office:</b>	DOE – SPRU Field Office John J. Rampe, Manager (518) 395-4718 <a href="mailto:john.rampe@emcbc.doe.gov">john.rampe@emcbc.doe.gov</a>
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#### **LEADS**

<b>Implementation:</b>	Not applicable.
<b>Breakthrough:</b>	Not applicable.
<b>Laboratory:</b>	Not applicable.

#### **I. SUMMARY & OBJECTIVES**

**Summary:** The purpose of this project is to remove radioactively-contaminated soils from the 15-acre North Field Area, a part of the SPRU Disposition Project, located at the Knolls Atomic Power Laboratory (KAPL) in Niskayuna, New York. KAPL is a Naval Reactors (NR) facility. Recovery Act funding will also be used to decontaminate and decommission two 1950's-era nuclear facilities.

The contamination in the North Field is surface soil contamination (primarily cesium-137, at levels up to 476 picocuries per gram) resulting from the historic storage and handling of waste drums from the original, 1950's-era SPRU project. The North Field Land Area Remediation will achieve the following:

- remove radioactive contaminants above cleanup levels;

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- transport about 6,000 cubic yards of soil to an off-site disposal area;
- perform confirmation sampling; and,
- re-grade and re-seed the area as appropriate.

The project involves cleanup of legacy contamination resulting from historic weapons development activities, which is a central component of the EM mission. The 15 acres of land to be remediated comprises about 50% of the contaminated soil footprint at SPRU, and completion of the North Field Land Area Remediation completes contaminated soil removal at SPRU.

Funding will be used to accelerate the North Field Land Area Remediation from FY 2012 and 2013 to FY 2009 - 2010. Accelerating the North Field Land Area Remediation to FY 2009 – 2010 will provide a steady level of land remediation work at the SPRU Disposition Project. The workforce that is currently engaged in performing soil removal in the SPRU Lower Level will be retained during this period, and additional workers will be hired to accelerate the project. The SPRU Disposition Project would complete EM's responsibilities at an active NR site two years early. At the conclusion of this project, the North Field will be returned to NR and will be available for continued mission use. This work has been awarded via modification to an existing task order for similar work at SPRU.

In addition, Recovery Act funding will be used to facilitate decontamination and decommissioning of two nuclear facilities (Buildings G2 and H2) at SPRU. These buildings contained the laboratory and waste treatment systems used to research processes for the separation of plutonium and uranium from irradiated matrices. They were active in the early 1950's, and comprise the total SPRU building footprint of approximately 50,000 square feet. The scope of this action includes removal of the two buildings and shipment of associated low-level, hazardous and industrial waste and building debris. The scope also includes installation of an access road to the SPRU nuclear facilities.

Recovery Act funding will be used to support D&D activities in FY 2010 and FY 2011. D&D activities funded by Recovery Act will be tracked and reported separately by the contractor, and will have separate metrics and Work Breakdown Structure elements assigned to them. The D&D work is being performed by a different contractor than the North Field Land Remediation, and the D&D work is already within contract scope. The D&D work is scheduled for completion in FY 2011. Recovery Act funding will support the majority of the D&D contractor positions in FY 2010 and FY 2011, allowing them to be retained.

### **Work Scope Changes from Original Project Operating Plan**

Not applicable.

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### **Buy-Back Work Scope**

Based on the potential availability of funds from unused management reserve and contingency funds and from cost efficiencies in executing the planned projects, the following additional candidate projects have been identified should funding become available:

Additional site removals if needed to support closure of SPRU

This project has ties to Departmental Strategic Mission themes as follows:

- DOE Strategic Theme 4: Environmental Responsibility – Protecting the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production.
  - o Goal 4.1 Environmental Cleanup – Complete cleanup of the contaminated nuclear weapons manufacturing and testing sites across the United States; and,
- DOE Strategic Theme 5: Management Excellence – enabling the mission through sound management.
  - o Goal 5.1 Integrated Management – Institute an integrated business management approach throughout DOE with clear roles and responsibilities and accountability to include effective line management oversight by both Federal and contractor organizations.

This project supports the EM strategic and mission goals as follows:

- EM is decontaminating and decommissioning facilities that provide no further value to reduce long-term liabilities and maximize resources for cleanup.
- EM is remediating soil and ground water contaminated with the radioactive and hazardous constituents.

**Public Benefits:** The project will remove radioactively-contaminated soil and transport it to an appropriate off-site disposal facility thus reducing overall risk to workers, the public and the environment. Acceleration of the North Field Land Area Remediation and awarding the work to the existing contractor will save up to \$2 million as compared to current plans, owing to the ability to use existing work documents and avoiding contractor mobilization costs

**Recovery Act Project Impacts:** This project will clean up about 15 acres of contaminated soil at KAPL, transport about 6,000 cubic yards of waste to an off-site disposal area, and make the land available for future use. The funding will also allow removal of two former processing and waste treatment buildings totaling about 50,000 square feet, as well as shipment of associated waste. These activities are consistent with EM's mission of cleaning up legacy contamination from historic nuclear weapons research and production.

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### **II. COST & SCHEDULE**

#### **Budget**

**Table 1: Budget Implementation Monthly & Yearly Obligations (\$M)**

The Project funding is subject to re-apportionment and will be finalized by 9/30/2010; the Project Operating Plan will then be reissued with an obligations table.

**Table 2: Budget Implementation Monthly & Yearly Expenditures (\$M)**

The Project funding is subject to re-apportionment and will be finalized by 9/30/2010; the Project Operating Plan will then be reissued with a costs table.

#### **Funds Returned and Offsetting Collections**

Not applicable to this project.

**Table 3: Funds Returned and Offsetting Collections (\$M)**

	<b>FY 09</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>	<b>FY 15</b>
Not applicable.							

#### **Indirect Costs**

The contractor currently performing similar work at the SPRU Disposition Project has an indirect rate of 3.51%.

#### **Changes to Baseline Budget**

**Table 4: Changes to Baseline Budgets (\$M)**

Not applicable

#### **Milestones**

Performance measures for this project are presented in Section III, Table 6.

**NEPA Compliance:** The scope of work is being undertaken pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; separate NEPA reviews are not required. The NEPA Compliance Officer will monitor implementation and, as necessary, determine whether future NEPA review is required.

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**Table 5: Delivery Schedule for Capital Asset Projects**  
**N/A (until OECM and EM agree on 413.3A graded approach)**

<b>Program/OECM Milestone</b>	<b>Delivery (End) Date</b>	<b>Comments</b>
Develop capital asset projects Integrated Project List	N/A	.
Develop Parametric Performance Baseline (Individual Projects)	<b>North Field:</b> January 2008  <b>D&amp;D:</b> January 2008	Complete
If < \$100 M Perform IPR, > \$100 M Perform EIR (Individual Projects)	HQ Program Review for both projects took place in August 2009; no major issues identified	Complete
Approve Performance Baseline	<b>North Field:</b> September 30, 2009  <b>D&amp;D:</b> CD-2/3 received August 11, 2008	Complete North Field CD2/3 September 28, 2009  Nuclear Facility CD2/3 August 11, 2008
Approve Start of Construction	<b>North Field:</b> September 30, 2009  <b>D&amp;D:</b> CD-2/3 received August 11, 2008	Complete North Field CD2/3 September 28, 2009  Nuclear Facility CD2/3 August 11, 2008
Approve Project Completion	<b>September 30, 2011</b> (entire project)	

**NOTES:** None.

### **III. PERFORMANCE**

#### **Performance Measures**

Following receipt of funding, activities for land remediation in FY 2009 will focus on preparation and validation of the contractor's project baseline, and approval of project work plans and safety documentation. Land remediation field work will begin in October 2009, and field work will be complete by July 2009. The task order modification contains the requirement that all work be completed by September 30, 2011.

Recovery Act funds that will be used to augment D&D activities are focused on removal of Buildings G2 and H2. Expenses for these activities will be incurred in FY 2010 and

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FY 2011, and the task order modification contains the requirement that all work be completed by September 30, 2011.

Weekly Schedule	Date
Statement of Work (SOW) Exhibits to EMCBC Contracts	3/5/2009
Resolve comments on the SOW from EMCBC Contracts	3/13/2009
Prepare draft action memorandum revision	3/20/2009
Receive approval of draft action memorandum revision	3/27/2009
Request a revised proposal/contract	3/31/2009
Issue public notice for the public comment period for action memorandum	4/10/2009
Open public comment period	4/17/2009
Address contractor questions on the request for proposal	4/24/2009
Negotiate a revised proposal/contract	5/1/2009
Issue negotiation position	5/8/2009

Monthly Milestones	Date
Modify land remediation task order	Jun-09
Land contractor issue a revised Worker Health & Safety Plan for approval	Jul-09
Land contractor issue a revised Radiological Protection Plan for approval	Aug-09
<b>Complete access road to SPRU nuclear facilities</b>	Aug-09
Land contractor issue an Excavation Work Plan; initiate North Field mobilization	Sep-09
Begin installation of G2 temporary power	Oct-09
<b>Begin North Field Excavation</b>	Nov-09
Begin cold and dark preparations for G2	Nov-09
Begin cold and dark preparations for H2	Dec-09
Complete cold and dark preparations for G2 and H2	Mar-10
Corrective actions complete from land baseline review	Jan-10
Initiate waste removal from H2	Feb-10
Begin piping and equipment removal from H2	Mar-10
Initiate final status surveys of North Field	Mar-10
Issue Draft North Field Final Status Survey reports	Jul-10
Begin radiological waste soil shipments (Building H2)	Nov-09
Complete piping and equipment removal from G2	Jun-10
Submit RCRA Characterization Report North Field (Red Pines)	Jun-10
Complete H2 hot cell 1	Jul-10
<b>Declare physical completion for North Field (15 acres remediated, 6,000 cubic yards of soil removed)</b>	Jul-10
Begin demolition and excavation of G2	Aug-10
Complete H2 hot cell 2&3	Sep-10
North Field Final Radiological Completion Report	Nov-10
Submit CD-4 documentation for North Field	Nov-10
Complete H2 hot cell 4&5	Nov-10
Building H2 Demo Ready	Nov-10
HQ approves North Field CD-4	Dec-10
Complete demolition of G2	Feb-11
Execute cost reduction initiatives/initiate mobilization for field season 2	Feb-11

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Begin backfill and grade of G2	Mar-11
Complete demolition and excavation of H2	May-11
Complete backfill and grade of H2	Jun-11
Complete backfill and grade of G2	Jul-11
Complete upper level FSS and CD-4 documentation	Aug-11
Contracts Closed	Sep-11

**Table 6: Project Performance Targets**

The period of performance for this Recovery Act work begins April 2009 through September 30, 2011. The project's performance targets and associated interim milestones documented in Table 6 however, denote planned accomplishments through September 30, 2010; consistent with the DOE routine performance reporting and the first Milestone for Recovery Funding.

Recovery Act Project Identification Code	2002160
Linkage To S-1 Priorities	Links to National Security and Legacy Priority 3: Complete legacy environmental cleanup.
Linkage to Current Program Goal (if applicable)	<p>DOE Strategic Theme 4: Environmental Responsibility – Protecting the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production.</p> <p>Goal 4.1 Environmental Cleanup – Complete cleanup of the contaminated nuclear weapons manufacturing and testing sites across the United States.</p> <p>This project supports the EM strategic and mission goals as follows:</p> <p>EM is transporting and disposing of low-level wastes in a safe and cost effective manner to reduce risk.</p> <p>EM is decontaminating and decommissioning facilities that provide no further value to reduce long-term liabilities and maximize resources for cleanup.</p> <p>EM is remediating soil and ground water contaminated with the radioactive and</p>

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	hazardous constituents.
Three-Year Outcome-Oriented Performance Measure	Remediate 15 acres of land contaminated with radioactivity; dispose of 6,000 cubic yards of waste at an appropriate off-site facility; re-grade and re-seed area; return land to NR for future use. Facilitates D&D of Buildings G2 and H2 (50,000 square feet total), including shipment of associated waste.
First Year Performance Target (FY 2009 accomplishments)	Issue requisite task order modifications and updates to CERCLA and NEPA documentation to enable North Field and Building D&D to proceed in FY 2010.
Q3 - Project-Level Quarterly Performance Milestone(s)	Issue task order modifications to aRc and WGI to incorporate ARRA work scope and requirements.
Q4 - Project-Level Quarterly Performance Milestone(s)	Revise SPRU Action Memorandum to select alternative for North Field Land Area.
Second Year Performance Target (FY 2010 accomplishments)	Complete excavation of 6,000 cubic yards of contaminated soil from North Field and restore site
Q1 - Project-Level Quarterly Performance Milestone(s)	D&D contractor initiates cold and dark preparations for nuclear facilities (November/December 2009); North Field soil removal begins (October 2009)
Q2 - Project-Level Quarterly Performance Milestone(s)	Soil removal final status surveys initiated (March 2010)
Q3 - Project-Level Quarterly Performance Milestone(s)	Complete piping and equipment removal from G2 (June 2010)
Q4 - Project-Level Quarterly Performance Milestone(s)	Contractor declares North Field physical completion (July 2010)
Third Year Performance Target (FY 2011 accomplishments)	Complete SPRU nuclear facilities demolition (September 2011)
Q1 - Project-Level Quarterly Performance Milestone(s)	Complete G2 demolition (February 2011)
Q2 - Project-Level Quarterly Performance Milestone(s)	Complete H2 demolition (May 2011)
Q3 - Project-Level Quarterly Performance Milestone(s)	Complete G2 and H2 backfill and demolition (June/July 2011)
Q4 - Project-Level Quarterly Performance Milestone(s)	Complete SPRU Disposition Project (September 2011)



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**NOTE:** Program goals are being accelerated through receipt of Recovery Act funding through the remediation of radioactive contamination in the SPRU North Field Area and demolition of the SPRU nuclear facilities two years earlier than previously planned (FY2011 vs. FY2013). The overall project outcome will be enhanced through anticipated cost savings realized by the acceleration and by the ability to use currently available work planning documents.

### National Strategic Benefits

**Table 7: National Strategic Benefits**

1. Carbon Emission Reductions: Not applicable.
2. Oil Consumption Reductions: Not applicable.

**NOTES :** None.

## IV. MANAGEMENT

### Secretarial-level Items

#### Intended Results and Linkage to Secretary's Priorities

The North Field Land Area Remediation links to the Secretary's priorities by cleaning up a site that is contaminated by radioactivity from historic nuclear weapons development activities (see National Security and Legacy Priority 3: Complete legacy environmental cleanup). Approximately 15 acres of land will be made available for future use when the project is completed, 6,000 cubic yards of soil will be taken off-site to a disposal facility, and two contaminated nuclear facilities totaling 50,000 square feet will be demolished and the associated waste removed. The project is cost effective, saving money through accelerating the work and modifying an existing task order. Workers currently engaged in soil cleanup at the SPRU Lower Level will be retained. The project's risks are well-known, manageable, and are commensurate with work currently being performed as part of the SPRU Disposition Project.

**Table 8: Secretary's Priorities**

Secretary's Priorities	Project Impacts (Qualitative)	Project Impacts (Quantitative)
Science and Discovery	Not applicable.	Not applicable.
Clean, Secure Energy	Not applicable.	Not applicable.
Economic Prosperity	Positive economic impact resulting from purchasing supplies and materials from local businesses and vendors, as well as by	Returns SPRU project areas to Naval Reactors for continued use.

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	retaining local contractors for project support functions.	
National Security and Legacy	Cleans up a legacy contamination site from historic nuclear weapons development activities and makes the land available for future use	Remediates a 15-acre site contaminated with radioactivity, and removes 6,000 cubic yards of contaminated soil to an off-site disposal facility; facilitates D&D and waste shipment from two facilities totaling 50,000 square feet.
Climate Change	Not applicable.	Not applicable.

### Collaboration and Coordination

Ongoing coordination and collaboration occurs with the local DOE-Naval Reactors Office in the execution of the SPRU Disposition Project. The SPRU Field Office provides weekly status briefings and quarterly management briefings to NR, and coordinates on issues including cleanup levels, project completion measures, work planning and execution, and external communications. NR and its contractors provide services such as security, utilities and emergency response capability to the DOE-SPRU Field Office and its contractors. Roles and responsibilities are formalized in a Memorandum of Agreement between EM and NR establishing the SPRU Disposition Project, as well as in a local agreement among DOE-SPRU, NR and NR's site contractor.

Portions of the SPRU project are regulated by the New York State Department of Environmental Conservation (NYSDEC) through a Resource Conservation and Recovery Act (RCRA) corrective action permit. The SPRU Field Office regularly informs NYSDEC staff and management of general project activities and status. The DOE-SPRU Field Office also apprises local government (most notably the Town of Niskayuna, New York) of project progress.

Prior to accelerating North Field remediation, DOE-SPRU revised its Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Action Memorandum. First issued in September 2007, the Action Memorandum selected the remedial alternatives for most of the SPRU Disposition Project, but deferred a selection for the North Field. DOE-SPRU, with assistance from the EM Consolidated Business Center, announced that soil removal is the preferred alternative for the North Field, and request public comments during a public comment period held in July 2009. Following the public comment period, the Action Memorandum was revised to note that removal was selected as the preferred alternative for the North Field, and that the project is being accelerated.

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### **Federal Infrastructure Investments**

There are no infrastructure investment project activities associated with the SPRU Recovery Act Project.

However, ancillary benefits will be achieved through the elimination of facilities resulting in reduced electrical power consumption and corresponding reduction of greenhouse gas emissions. Reuse/Recycle of excess materials could result in reduced consumption in fossil fuels required to process raw materials.

These facilities contain hazardous or radiological material. Accelerating the removal and proper disposal reduces risk of releases of this material to the environment

### **Line Management**

The SPRU Disposition Project Work Breakdown Structure (WBS) has separate entries for North Field work, and all costs on this project will be collected and evaluated separately from other SPRU activities. The task order Statement of Work for soil removal contains unambiguous performance elements and project completion criteria. The DOE-SPRU Field Office (with assistance from the EM Consolidated Business Center) performed Independent Project Review (IPR) of the baseline for North Field work.

The SPRU WBS structure allows for D&D activities to be tracked separately. The D&D portion of the SPRU Disposition Project has already been the subject of an IPR.

The soil contractor will be required to self-certify its Earned Value Management System (EVMS) to ensure the validity of project reporting; the D&D contractor is in the process of having its EVMS certified by the Office of Engineering and Construction Management. The DOE-SPRU Field Office meets weekly with the contractors to review project status, and the contractors submit separate monthly status reports that are reviewed by the Field Office. The DOE-SPRU Field Office has prepared a Task Order Management Plan for Recovery Act work.

### **Needs from Staff Offices**

#### **1) Human Capital**

The SPRU Field Office anticipates the need for one additional field oversight person to serve as a Facility Representative in Training through FY2011. This position is proposed as a full-time Federal position, with the need for a mobility agreement and career ladder to attract candidates. Pending hiring of a Federal employee for the SPRU Field Office, SPRU has retained a contractor to fulfill this function.

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**Table 9: Information on Hiring Under the Recovery Act**

# & Type of Positions	Location	Federal or Contractor	Timeframe
General Engineer/Physical Scientist, GS-801/1301-13/14	SPRU Field Office, Niskayuna, New York	Federal	2+ years, through FY 2011, with mobility agreement

### 2) Procurement

**Table 10: Procurement Plans**

Activity	Type	New/Exist (N/E)	Changes (E), Needs (N)	Status	Expected Complete	Issues (Y/N)
Perform North Field Land Area Remediation	Task Order	Existing	Modify existing task order under ID/IQ contract	Task order modification executed	5/4/2009; Complete	N
Perform nuclear facility D&D	Task Order	Existing	Modify existing task order under ID/IQ contract	Task order modification executed	7/28/2009; Complete	N